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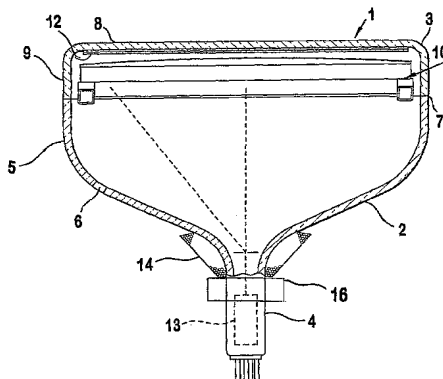
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(54) Title: HDTV CRT DISPLAY HAVING OPTIMIZED TUBE GEOMETRY, YOKE FIELD AND GUN ORIENTATION



(57) **Abstract:** A cathode ray tube (1) has a faceplate panel (3) with a short axis and a long axis. The faceplate panel has a display screen on the inside of the panel and the panel extends back to a funnel (5) which houses an electron gun system within an integral neck (4). The electron gun system produces co-planar beams arranged in a linear array which is parallel to a short axis of the screen (12). A deflection system (14) is positioned over the neck of the funnel for applying electromagnetic control fields to electron beams emanating from the electron gun system directed toward the screen. The deflection system has a first deflection coil system for generating a substantially barrel shaped magnetic field for deflecting the beams in the direction of the long axis and a second deflection coil system for generating a substantially pincushion magnetic field for deflecting the beams in the direction of the short axis. At least one of the deflection coil systems generates a misconvergence along at least one of the axes parallel to the direction of the co-planar beam. Coils (16) for generating a quadrupolar magnetic field are coupled to the deflection coil systems for correcting misconvergence.



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